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EXAMINER

ALBERTALLI, BRIAN LOUIS

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,145

Applicant(s)

WU, MARK

Examiner

Brian L Albertalli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed February 10, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

In claim 11, the added limitation that updates to the DSP boot program are searched for *when a format of an audio file changes* is new matter. In all the descriptions in the specification of searching for an update to the DSP boot program, searching for updates to the DSP boot program occur during the power up process. For example, page 16, paragraph 51 of the specification discloses, "Referring to Figures 4 and 5b, the process begins by powering on 501b the audio device 401 or by resetting the audio device 401. Next, the audio device 401 is initialized 501b. Following initialization of the audio device 401 a check 503b is made to see if there is upgrade firmware for the audio device's 401 controller or DSP." See also page 21, paragraph 62 ("During initialization checks are made to determine if there is an upgrade"), and pages 21-22, paragraph 63 ("After loading the DSP bootup code, the controller 701a checks 704b an external ROM 718a for a firmware upgrade"). These sections of the specification provide no indication that the searching process occurs *when the format of an audio file changes*.

In page 22, paragraph 64, lines 9-12, the specification states that the audio devices firmware can be updated at any time through either the I2C port, or USB port.

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Page 23, paragraphs 65 and 66 describe the updating process through the I2C port and USB port, respectively. In both cases, an upgrade is initiated by the host "sending an upgrade command and code" through the I2C port or USB port. The code that is to be used to upgrade the DSP is sent with the upgrade command; thus, there is no step of *searching* for the DSP updates. Furthermore, this still provides no suggestion that the process occurs *when the format of an audio file changes*.

Therefore, the phrase, "when a format of an audio file changes" in line 4 of claim 11 introduces new matter.

In claim 18, the added limitation that the function of an entry code related to a user request entered by a keypad *is determined out of a plurality of functions, which includes... providing a karaoke feature* is new matter. While the specification provides a description of determining an entry code for a playback function (page 17, lines 2-5, to initiate playing of an audio file, the play button on a keypad is pressed), as well as the recording function (page 17, paragraph 53, lines 2-4, to initiate recording, a recording function on a keypad is pressed), there is no description of a keypad function that enables a karaoke feature. Page 18, paragraph 54 discloses to utilize the karaoke feature, "a user would begin playing 501e an audio file". Similarly, page 27, paragraph 73 discloses "a voice is received 1001 into a computer's microphone at the same time that the audio device's play function is being utilized". This is not equivalent to determining a karaoke function based on the entry code entered by the user. For this, a separate karaoke function button with a corresponding entry code would have to be

provided. Furthermore, as illustrated by paragraph 73, at best, a karaoke function is provided when a voice is received into a computer's microphone. The voice entered by the user is not equivalent to an entry code related to a *user request at a keypad*.

Therefore, the phrase "and providing a karaoke feature" in lines 10-11 of claim 18 introduces new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

Applicant's arguments, see pages 14-15, filed February 10, 2005, with respect to the rejection(s) of claim(s) 1 under 35 U.S.C 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 U.S.C. 103(a), as being unpatentable over Du et al. (U.S. Patent 6,675,233), in view of Altare et al. (U.S. Patent 6,791,481).

Applicant's arguments with respect to the rejection of claim 18 (pages 15-17) have been fully considered but they are not persuasive. As currently amended, claim 18 reads, in part, "the function of the entry code at the audio device is determined out of a plurality of functions, which includes...". This wording is in the alternative, and thus requires only one of the plurality of functions (i.e. playback, record, or karaoke functions) be met by the prior art. As illustrated by the Applicant, Du et al. disclose a

playback function key (see column 4, lines 56-67 of Du et al., and page 16, last paragraph of Applicant's arguments).

Applicant's arguments with respect to a rejection of claim 1 under 35 U.S.C. 103(a) (pages 17-18) have been fully considered but they are not persuasive. As currently amended, claim 18 reads, in part, "recording audio files to the primary device's storage location while the primary device is in the power saving mode". The Applicant has illustrated, Altare et al. discloses that the hard disk of a computer is powered up. This is not equivalent to powering up "the primary device" as required by claim 1. Power is provided to the hard disk so the physical functions required to read/write data (spinning the drives, etc.) can be performed. Providing power to the hard disk is inherently required if the hard disk is going to be used as a storage location.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant's arguments with respect to a rejection of claim 18 under 35 U.S.C. 103(a) (page 19) is considered moot, as the rejection of claim 18 under 35 U.S.C. 102(e) still stands, as discussed above.

Applicant's arguments with respect to a rejection of claim 28 under 35 U.S.C. 103(a) (page 20) have been fully considered but they are not persuasive. The only limitations that Du et al. do not disclose is writing to user files, and that the previously claimed output port is an "input/output" port. These limitations are met by Altare et al., and will be illustrated in the rejection below.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant's arguments with respect to claim 11 (page 21-22) have been fully considered but they are not persuasive. The relied upon section of Du et al. that the Applicant has presented (column 5, lines 6-22 of Du et al.) is not related to the search of a storage location for the DSP boot program, and further, this section was not relied

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upon in the rejection of claim 11 in the previous Office Action. The applicable section of Du et al. (column 4, line 67 to column 5, line 4) that was used in the previous rejection discloses that instructions for the retrieval and play of files (the “boot program” for the DSP) are found in flash memory 52. Furthermore, Du et al. discloses that updating the decoding algorithm (which is equivalent to the claimed “boot program”) is preferable. Still further, the decoding algorithm used to process an audio file in a DSP is inherently tied to the format of the audio file. When the instructions of Du et al. for the playback of the audio files are retrieved from memory, they must necessarily be the proper decoding algorithm for that file type.

Du et al. does not disclose a mechanism by which to determine whether the boot program that is searched for is an *updated* boot program, however, Bartel et al. provides this mechanism. The update flag as disclosed by Bartel et al. provides a means for determining whether the boot program is an *updated* program, and provides the *updated* boot program to the processor.

Therefore, the combination of Du et al. and Bartel et al. meets the limitation of “searching for updates to the DSP program when a format of an audio file changes”.

Applicant’s arguments with respect to claim 21 (page 24) are considered moot, as the rejection of claim 18 under 35 U.S.C. 102(e) still stands, as discussed above.

Applicant’s arguments with respect to claim 35 are considered moot, as the rejection of claim 28 under 35 U.S.C. 103(a) still stands, as discussed above.

Oath/Declaration

The objection to the oath made in the previous Office Action appears to be in error due to scanning errors in the creation of the Image File Wrapper for the application. The objection to the oath/declaration is withdrawn.

Drawings

The amendments to the drawings overcome the objections made in the previous Office Action. The objections to the drawings are withdrawn.

Claim Objections

The amendments to the claims overcome the claim objections made in the previous office action.

However, currently amended claim 28 is objected to for the following informalities: in line 10 of the claim, "the output port" lacks antecedent basis. Therefore, "the output port" should be –the input/output port.

Claim Rejections - 35 USC § 101

The amendment to claim 10 overcomes the rejection under 35 U.S.C. 101 made in the previous Office Action. The rejection of claim 10 under 35 U.S.C. 101 is withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The amendment to claim 10 overcomes the rejection under 35 U.S.C. 112, first paragraph made in the previous Office Action. The rejection of claim 10 under 35 U.S.C. 112, first paragraph is withdrawn.

However, claims 11 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See discussion under Response to Amendments heading, above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 18, 19, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Du et al. (U.S. Patent 6,675,233).

In regard to claim 18, Du et al. discloses a method of processing an audio file located on a primary device's storage location comprising:

- accepting a user request at the keypad (function keys 66);

- converting the user request to an entry code;

- transmitting the entry code to an audio device (controller 18; the external function keys 66, allow a user to input a request, column 4, lines 56-58; since the function keys are external to the controller 18, they must necessarily convert the user request to an entry code and transmit it to the controller 18);

- determining the function of the entry code at the audio device (controller 18 includes a function key interface 46 to interpret commands generated by function keys 66, column 4, lines 64-67); and

- processing the audio file on the primary device's storage location according to the function determined at the audio device (controller 18 determines the MP3 file indicated and retrieves it from a drive, column 5, lines 13-16), wherein the function of the entry code is determined out of a plurality of functions, which includes playing an audio file from the primary device's storage location, recording sound to the primary device's storage location, and providing a karaoke feature while the primary device is in power saving mode (a playback key starts playback while the primary device is in power saving mode, column 4, lines 56-67).

In regard to claim 19, Du et al. discloses:

accepting a user request to play an audio file from a storage location (disk drive 20 or CD-ROM drive 22) where the storage location is attached to the primary device (column 5, lines 13-16);

transmitting the user request to play an audio file to a micro-controller (function key interface 66 generates command to the processor 48, column 4, lines 64-67);

determining the format, name, and location of the audio for which the play request has been made (processor 48 traverses the directory structure according to user commands, column 5, lines 6-9);

transmitting the format, name, and location of the audio file to a DSP (processor 48 retrieves the selected file from the drive and sends it to decoder 58, column 5, lines 13-16 and 21-22); and

notifying the DSP that it is time to start playing the audio file (once the file is received by the decoder 48, it is converted to PCM data sent to DAC 60 to be converted to an analog waveform and played, column 5, lines 26-28, 36-38, and 40-43).

In regard to claim 25, Du et al. discloses the audio file has a MP3 format (column 1, lines 40-41).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 19, 20, 22-24, 26-34, and 36-52 are rejected under 35 U.S.C.

103(a) as being unpatentable over Du et al. in view of Altare et al. (U.S. Patent 6,791,481).

In regard to claim 1, Du et al. discloses a method comprising:

recognizing that a primary device with a storage location has been placed in a power saving mode; and

switching file access control of the primary device's storage location from the primary device to an audio device after the primary device has been placed in a power saving mode (Fig. 2, when the system is off, a controller 18 is used to traverse drives 20 and/or 22, column 4, lines 6-12).

Du et al. do not disclose recording audio files to the primary device's storage location while the primary device is in the power saving mode.

Altare et al. discloses an MP3 recorder/player for use with a CD-ROM that converts analog sound or speech to digital code (digitize, column 12, lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to also record audio files in addition to playing back audio files while the primary device was in power saving mode, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claim 2, Du et al. discloses the primary device (Fig. 3, computer system 10) sending a signal to the audio device (controller 18) to alert the audio device that the primary device has been placed in a power saving mode (switches 68 decouple the controller 18 when the system 10 is ON, column 6, lines 25-29; power is supplied to the controller 18 when the system 10 is OFF and a function key is pressed, column 6, lines 17-25; furthermore, the switches 68 must necessarily couple when the system 10 is switched from ON to OFF).

In regard to claim 3, Du et al. discloses switching control of the primary devices storage location (drives 20 and/or 22) and the primary devices CODEC (MP3 decoder) to the audio device (controller 18) upon a user request while the primary device (system 10) is not in power saving mode (MP3 files are decoded and stored on drives 20 and/or 22 when the system 10 is ON, column 7, lines 31-37).

In regard to claims 4 and 5, Du et al. discloses the audio device is installed within the primary device (Fig. 3) or is external to the primary device (Figs. 5A and 5B, column 6, lines 42-43; note also that MP3 decoding takes place at the external MP3 device, column 6, lines 55-58).

In regard to claim 6, Du et al. discloses the audio device is coupled to the primary device through a USB connection (column 6, lines 61-64).

In regard to claim 7, Du et al. discloses the primary device is a laptop computer (portable laptop computer system 10, column 3, lines 44-45).

In regard to claims 8-10, Du et al. discloses an interface to a CODEC that converts digital code to analog sound, speech, and/or video (controller 18 includes an integrated DAC to convert digital to analog, column 4, lines 22-25; and video driver circuitry, lines 36-38).

Du et al. further discloses that a CODEC can be implemented in hardware (wherein the controller includes an integrated DAC) or in a combination of hardware and software, or a medium including data that when accessed by the audio device, causes the audio device to convert analog sound (wherein an external DAC is used, and the controller 18 includes a decoder algorithm stored in flash memory, column 4, lines 25-27 and column 5, lines 28-29).

Du et al. does not disclose converting analog sound, speech, and/or video to digital code.

Altare et al. discloses an MP3 recorder/player for use with a CD-ROM that converts analog sound or speech to digital code (digitize, column 12, lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to also convert analog sound, speech, and/or video to digital code, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

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In regard to claim 20, Du et al. does not disclose any features of the claim.

Altare et al. discloses :

accepting user request to record sound to a storage location, where the storage location is attached to the primary device (menu selection includes Record selection, column 9, line 6);

transmitting the user request to record sound to a microcontroller (Fig. 1, Keyboard processor 35 manages the operator interface, column 12, lines 9-12);

accepting sound into a microphone (43, column 12, lines 5-9);

receiving sound accepted into the microphone into a CODEC (33, column 12, lines 5-9);

converting the sound from an analog stream at the CODEC to a digital stream (the CODEC is in connection with a hard disk, therefore the CODEC must convert the analog stream to a digital stream, see Fig. 1);

transmitting the digital stream from the CODEC to a digital interface (See Fig. 1, connection between audio CODEC 33 and MP3 Encoder 34);

receiving the digital stream from the digital interface into a DSP (column 10, lines 27-30);

performing noise cancellation if necessary (MP3 encoders inherently adjust to reduce quantization noise if the quantization noise exceeds the masking threshold).

compressing the digital stream if necessary (MP3 encoders inherently compress a digital audio stream); and

writing the digital stream to a storage location (hard disk 30, column 10 lines 37-41).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to perform the steps as disclosed by Altare to record sound from a microphone, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claims 22 and 23, neither Du et al. nor Altare et al. explicitly disclose how a function related to a keypad entry code is determined.

Official notice is taken that it is notoriously well known and recognized in the art to compare an entry code to a table of entry codes including corresponding functions associated with each entry code to determine the function related to a keyboard entry node.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Du et al. and Altare et al. to compare an entry code to a table of entry codes including corresponding functions associated with each entry code to determine the function related to a keyboard entry node, since this provides a extremely simple, fast means to associate a user entry on a keyboard with the corresponding function, especially when there are a limited number of keys and associated functions.

In regard to claims 24, 26, and 27, Du et al. discloses that the audio controller 18 is a general purpose audio controller capable of receiving, playing, and/or decompressing any type of audio data (column 7, lines 11-19).

Neither Du et al. nor Altare et al. explicitly disclose that the data is CD audio data, WAV data, or AAC data.

Official notice is taken that it is notoriously well known and recognized in the art to code audio as CD audio data, WAV data, or AAC data.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to handle CD audio data, WAV data, or AAC data since these are all common audio formats, and a user would most likely have audio in these formats. By modifying Du et al. to handle these formats, it would allow the method to process more of the files a user would have, eliminating the need for several different products for each format.

In regard to claim 28, Du et al. discloses an apparatus comprising:

a micro-controller (Fig. 4, processor 48);

an input device coupled to the micro controller, to receive user entries to control a primary device's audio device when the primary device is in a power saving state (function keys 66);

an interface to the micro-controller, the interface to provide the micro-controller with access to a storage location, wherein the storage location is coupled to the primary

device (see Fig. 1, disk drive 20 and CD-ROM 22 are coupled to the CPU 12 of the computer system 10 and Fig. 4, Host IDE bus and Slave IDE bus);

a gateway coupled to the micro-controller (function key interface 46 and LCD interface 57 each act as gateways to their respective external devices);

a DSP coupled to the gateway, the DSP to read user requested files and decode user requested files when the device is in power saving mode (decoder 58, column 5, lines 21-22 and lines 36-38 and column 6, lines 18-20); and

an output port coupled to the DSP (decoder), the output port to transmit a decoded audio stream out of the DSP (column 5, lines 38-43).

Du et al. does not disclose that the DSP is to write to user files; and

that the output port receives a digital signal into the DSP.

Altare et al. discloses a system comprising a DSP (MP3 encoder/decoder 34) that writes to user files (to hard disk 30, column 10, lines 31-41); and

an input/output port to receive a digital signal into the DSP (see Fig. 1, data from audio codec 33 is a digital signal, passed to MP3 encoder/decoder 34, column 10, lines 19-20 and lines 27-30).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to include means to receive a digital signal and write to user files, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claims 29 and 30, Du et al. discloses the interface is an IDE interface (see Fig. 1, disk drive 20 and CD-ROM 22 are coupled to the CPU 12 of the computer system 10 and Fig. 4, Host IDE bus and Slave IDE bus) and the storage location is a hard drive (20, column 3, line 58).

In regard to claims 31-33 and 43-44 neither Du et al. nor Altare et al. disclose the storage location is a CD-RW drive, or a Smartmedia flash memory, however, official notice is taken that CD-RW and Smartmedia flash memory drives are notoriously well known in the art and it would have been obvious to one of ordinary skill in the art at the time of invention to use a CD-RW drive or Smartmedia flash memory as a storage location since CD-RW or Smartmedia flash memory would provide a rewritable, compact, and portable means for storage.

Furthermore, if a Smartmedia flash memory were used for storage, inherently, a Smartmedia interface would be needed to read and write from the Smartmedia flash memory.

In regard to claim 34, Du et al. suggests the primary device is a notebook computer (portable laptop computer system 10, column 3, lines 44-45).

In regard to claim 36 Du et al. discloses a USB interface coupled to the microcontroller (column 6, lines 61-64).

In regard to claims 37, 38, and 46, Du et al. discloses a master (host) port and a slave port coupled to the micro-controller (Fig. 4, Host IDE bus and Slave IDE bus).

Neither Du et al. nor Altare et al. disclose an I2C master port or an I2C slave port.

Official notice is taken that it is notoriously well known and recognized in the art that I2C is an industry standard for inter-IC control.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. and Altare et al. to include an I2C master port and an I2C slave port, since I2C provides a standard interface between IC's that alleviates many interfacing problems.

In regard to claim 39, Du et al. discloses a ROM coupled to the microcontroller (decoder 58 stores a decoder algorithm therein, column 5, lines 26-28).

In regard to claim 40, Du et al. discloses an SRAM coupled to the micro-controller (50, column 5, lines 16-18).

In regard to claim 41, Du et al. discloses an SD flash controller coupled to the micro-controller (flash memory 52, column 5, lines 29).

In regard to claim 42, neither Du et al. nor Altare et al. explicitly disclose that the micro-controller is an 8051. However, official notice is taken that it is notoriously well

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known that the 8051 is one of the most popular micro-controllers used and it would have been obvious to one of ordinary skill in the art at the time of invention to use an 8051 microcontroller because they are prevalent in the industry and cheap.

In regard to claim 45, Du et al. must inherently have an AC link interface coupled to the DSP in order to charge the battery of the primary device.

In regard to claims 47-50, Du et al. discloses the device is a single device that is internal to the primary device (Fig. 1, controller 18 is within the computer system 10), as well as a part of a single device which is external to the primary device (Fig 5A, controller 18' is operable with external MP3 player 70, column 6, lines 42-43).

In regard to claim 51, Du et al. discloses an interface coupled to the controller comprises a plurality of interfaces (column 6, lines 61-64).

In regard to claim 52, Du et al. discloses a storage location comprises a plurality of storage locations (drives 20 and 22).

Claims 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al., in view of Bartel et al. (U.S. Patent 6,754,895).

In regard to claim 11, Du et al. discloses searching a storage location for a digital signal processor (DSP) boot program; and

providing the DSP with the boot program when the format of an audio file changes (Fig. 4, instruction for the retrieval and play of files are stored in flash memory 52, and provided to the processor 48 upon activation of a function key, column 4, line 67 through column 5, line 4).

Du et al. further discloses that the decoding algorithms stored in flash memory 52 should be updateable (column 5, lines 31-34).

Du et al. does not disclose searching for updates to the DSP boot program; and providing the DSP with updates for the DSP boot program.

Bartel et al. discloses a method for updating a processor that searches for updates to a boot program (Fig. 6, step 604 the nonvolatile memory is checked to see if an update flag has been set, column 8, lines 13-15); and

provides the processor with the updates to the boot program (step 607, the firmware is updated, column 8, lines 53-58).

Bartel et al. further discloses that the updating occurs automatically without the need for any user intervention (column 8, lines 9-13).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to search for an update to the DSP boot program and to provide the updates to the DSP, since by updating without the need for user intervention, the update is robust and immune to error confusion, as taught by Bartel et al. (column 3, lines 28-30).

In regard to claim 12, Du et al. discloses searching a storage location for a DSP boot program with a micro-controller (Fig. 4, microprocessor 48 provides decoder 58 with algorithm stored in flash memory 52, column 5, 28-31).

In regard to claim 13, the combination of Du et al. and Bartel et al., as applied to claim 11, above, discloses in Bartel et al. searching for updates to the DSP boot program with a micro-controller (Fig. 2, controller 28 runs the update application used to perform the search in step 604, column 8, lines 4-6 and lines 9-13).

In regard to claims 14-17, neither Du et al. nor Bartel et al. explicitly state what type of storage location is searched for boot programs or updates to the boot program.

Official notice is taken that ROM's, SRAM's, and external ROM's are all notoriously well known and recognized in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Du et al. and Bartel et al. to store boot programs and boot program upgrades in either ROM's, SRAM's, or external ROM's, since, as is well known in the art, these storage devices provide compact, fast, and in the case of an external ROM, portable, means for storing data.

Claims 21 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al., in view of Altare et al., and further in view of Lee (U.S. Patent 6,278,048).

In regard to claim 21, Du et al. discloses transferring control of a primary device's audio control to a secondary device's audio control (column 4, lines 6-12).

Du et al. does not disclose any microphone features.

Altare et al. discloses accepting sound into a microphone (column 12, lines 5-9); amplifying the voice input at the microphone (a microphone input must inherently be amplified to bring the signal to line level before digitization); and

outputting the voice after it has been amplified through a speaker (column 10, lines 19-27).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to accept a microphone and output the voice through a speaker, so the user would be able to record and playback input from a microphone without having to turn the computer on, thereby saving battery power.

Du et al. and Altare et al. do not disclose accepting sound in the microphone while an audio files is playing; or

outputting the voice at the same time the audio file being played is having its sound output through the speaker.

Lee disclose a portable MP3 karaoke player that accepts sound in a microphone while an audio file controlled by an audio device (Fig. 1, receiver 15) is playing from a storage location (column 3, lines 60-67); and

outputting the voice at the same time the audio file being played is having its sound output through the speaker (column 4, lines 21-39).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify the combination of Du et al. and Altare et al. to accept and playback a voice through a microphone while music was playing in order to implement a karaoke feature that would allow a user to use their laptop as a karaoke machine without having to buy a separate device.

In regard to claim 35, neither Du et al. nor Altare et al. disclose the device is an audio jukebox.

Lee discloses an audio jukebox (karaoke machine, column 3, lines 31-33).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Du et al. and Altare et al. so the primary device was a jukebox, so the portable jukebox would be able to save power allowing it to be used for longer periods where power was not available (outside, etc.)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aguilar et al. (U.S. Patent 6,892,297) disclose a method of searching for a updated version of a boot code.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L Albertalli whose telephone number is (571) 272-7616. The examiner can normally be reached on Mon - Fri, 8:00 AM - 5:30 PM, every second Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BLA 5/26/05



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